

REMARKS/ARGUMENTS

In response to the Examiner's first Office Action of January 13, 2006 the Applicant respectfully submits the accompanying Amendment to the specification, drawings and claims, and the below Remarks.

Regarding Amendment

In the Amendment:

page 17, line 1, page 18, line 19, page 21, lines 7 and 35 and page 26, line 1 of the present specification are amended to omit reference to Fig. 17C;

Fig. 43 is amended to include the reference sign "500", as is described at page 35, lines 1-8 of the present specification;

independent claim 1 is amended to clarify that at least two fluid distribution members are provided, each for one of the printhead integrated circuits, and to incorporate the subject matter of dependent claims 40, 41 and 42. Support for this amendment can be found at page 12, lines 3-11 of the present specification;

dependent claims 40 and 42 are cancelled accordingly;

dependent claims 41, 43 and 53 are amended accordingly; and

dependent claims 2-39, 44-52 and 54-77 are unchanged.

It is respectfully submitted that the above amendments do not add new matter to the present application.

Regarding Drawing Objections

Regarding Fig. 17C

It is respectfully submitted that the above-described amendments to omit reference to Fig. 17C in the present specification, provides the correction required by the Examiner.

Regarding reference sign "500"

It is respectfully submitted that the above-described amendment to Fig. 43 to insert the reference sign "500", provides the correction required by the Examiner.

Regarding Claim Objections

It is respectfully submitted that the above-described amendment to claim 1 to clarify that at least two fluid distribution members are provided, each for one of the printhead integrated circuits, provides sufficient antecedent basis for the recitation "respective ones of the fluid distribution members" and clarifies that the claimed fluid distribution members refer to the disclosed fluid distribution stacks 500 (see page 12, lines 3-11 of the present specification).

Regarding 35 USC 102(b) Rejections

It is respectfully submitted that the subject matter of amended independent claim 1, and claims 2-6, 10-14, 19, 20, 23-26, 28, 31-33, 35, 36, 41, 43, 44 and 50-77 dependent therefrom, is not disclosed by Silverbrook et al. (US 6,439,908), for at least the following reasons.

In the present invention, each, single printhead module 30 has two or more printhead tiles/integrated circuits 50,51 arranged on an elongate fluid channel member 40 removably mounted within a casing 20. A printhead assembly 10 is formed by connecting the flex printed circuit boards 80 of the printhead module(s) with associated drive electronics 100 mounted to the casing via printhead circuit board 90. Connectors 81 and 98 are provided on the PCBs to allow easy connection and disconnection. By using such printhead modules, each having multiple printhead tiles, in the printhead assembly, replacement of the modules and selection of printhead length are easily provided without the need to provide individual controllers and connections for each printhead integrated circuit (see page 9, line 31-page 10, line 12 and page

19, lines 3-32 of the present specification). Amended independent claim 1 recites these features of the present invention.

On the other hand, Silverbrook discloses an arrangement in which each printhead module 12 has a single microelectromechanical chip 18 and support molding 26,28. Each module is plugged into a reservoir molding 32 housing an ink reservoir 16, which is secured to a chassis 14. Each module may be removed from the reservoir molding, however scalability of the printhead assembly 10 is not provided, as the reservoir molding is a set length.

Further, contrary to the Examiner's contention, drive electronics are not provided on the printhead assembly of Silverbrook, rather the PCB 54 of the chassis has a connector 66 which connects to an external controller (see col. 2, lines 6-53 and col. 4, lines 6-18 of Silverbrook), as is required by amended claim 1.

Thus, the subject matter of amended independent claim 1, and claims 2-39, 41 and 43-77 dependent therefrom, is not disclosed or suggested by Silverbrook.

***Regarding 35 USC 103(a) Rejections
Regarding Claims 7 and 16-18***

It is respectfully submitted that the subject matter of dependent claims 7 and 16-18 is not taught or suggested by Silverbrook et al. in view of Milan (US 5,658,158), for at least the following reasons.

Milan merely discloses a modular surge protection system 20 in which power modules 21 are interconnected at male and female portions 41 and 42 (see col. 5, lines 1-11 of Milan). Milan does not teach or suggest a printhead assembly having a printhead module and drive electronics as recited in amended independent claim 1.

Thus, the subject matter of amended independent claim 1, and 2-39, 41 and 43-77 dependent therefrom, is not taught or suggested by Silverbrook et al. or Milan either taken alone or in combination.

Regarding Claims 8, 9, 21 and 22

It is respectfully submitted that the subject matter of dependent claims 8, 9, 21 and 22 is not taught or suggested by Silverbrook et al. in view of Spivey (US 6,190,002), for at least the following reasons.

Spivey merely discloses an assembly of printheads 42,46,50,54 and associated semiconductor chips 55 which are attached to pen body 58 using epoxy adhesive 66 which is cured to secure the attachment (see col. 5, lines 1-3 and col. 6, lines 7-17 of Spivey). Spivey does not teach or suggest a printhead assembly having a printhead module and drive electronics as recited in amended independent claim 1.

Thus, the subject matter of amended independent claim 1, and 2-39, 41 and 43-77 dependent therefrom, is not taught or suggested by Silverbrook et al. or Spivey either taken alone or in combination.

Regarding Claims 17 and 18

It is respectfully submitted that the subject matter of dependent claims 17 and 18 is not taught or suggested by Silverbrook et al. in view of Milan and further in view of Spivey, for at least the above-discussed reasons.

Regarding Claim 27

It is respectfully submitted that the subject matter of dependent claim 27 is not taught or suggested by Silverbrook et al. in view of Silverbrook (WO 01/089849), for at least the following reasons.

Silverbrook merely discloses a single laminated stack 11 mounting several print chips 27 to an ink distribution molding 35 (see page 5 of Silverbrook). Silverbrook does not teach or suggest a printhead assembly having a printhead module and drive electronics as recited in amended independent claim 1.

Thus, the subject matter of amended independent claim 1, and 2-39, 41 and 43-77 dependent therefrom, is not taught or suggested by Silverbrook et al. or Silverbrook either taken alone or in combination.

Regarding Claim 34

It is respectfully submitted that the subject matter of dependent claim 34 is not taught or suggested by Silverbrook et al. in view of Patil et al. (US 6,830,646), for at least the following reasons.

Patil merely discloses an arrangement in which the nozzle plate/chip assembly 28/10 (which corresponds to the claimed fluid distribution members carrying the printhead integrated circuits) is attached to the cartridge body 44 (which corresponds to the claimed support member) with die bond adhesive which is only provided around the edges of the chip 10 to seal the entire chip (see col. 12, lines 5-34). Patil does not teach or suggest a printhead assembly having a printhead module and drive electronics as recited in amended independent claim 1.

Thus, the subject matter of amended independent claim 1, and 2-39, 41 and 43-77 dependent therefrom, is not taught or suggested by Silverbrook et al. or Patil either taken alone or in combination.

Regarding Claims 37-39

It is respectfully submitted that the subject matter of dependent claims 37-39 is not taught or suggested by Silverbrook et al. in view of Lodal et al. (US 2003/0202034), for at least the following reasons.

Lodal merely discloses a guide 26 which is positioned adjacent a print head 20 so that the surface of the guide which contacts print media 28 is opposite the print surface. However, as seen in FIG. 1 of Lodal the print media is free to move between the contact surface of the guide and the print head, such that direct contact of the print media with the print head is possible. Lodal does not teach or suggest a printhead assembly having a printhead module and drive electronics as recited in amended independent claim 1.

Thus, the subject matter of amended independent claim 1, and 2-39, 41 and 43-77 dependent therefrom, is not taught or suggested by Silverbrook et al. or Lodal either taken alone or in combination.

Regarding Claims 45-49

It is respectfully submitted that the subject matter of dependent claims 37-39 is not taught or suggested by Silverbrook et al. in view of Silverbrook (US 6,916,082), for at least the following reasons.

Similar to Silverbrook et al., Silverbrook discloses an arrangement in which each printhead module 46 has a single printhead chip 186 mounted on a carrier 187 which merely defines an electrical connection zone for the chip. Each carrier is mounted to a channel 62 of the chassis 60 within which is mounted individual ink distribution arrangements 72 for each of the modules, as is clearly illustrated in Fig. 8 of Silverbrook. Each module may be individually removed from the channel and the respective ink distribution arrangement, which Silverbrook teaches provides the modularity of the assembly (see col. 5, lines 7-11 and 47-63, and col. 9, lines 1-12 of Silverbrook). Silverbrook does not teach or suggest a printhead assembly having a printhead module and drive electronics as recited in amended independent claim 1.

Thus, the subject matter of amended independent claim 1, and 2-39, 41 and 43-77 dependent therefrom, is not taught or suggested by Silverbrook et al. or Silverbrook either taken alone or in combination.

Regarding Provisional Double Patenting Rejections

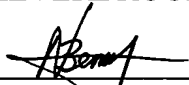
With respect to the provisional non-statutory double patenting rejections of pending claims 1-41 and 45-77 over the indicated claims of copending Application Nos. 10/760,233, 10/760,243, 10/760,182, 10/760,272, 10/760,273, 10/760,185, 10/760,253, 10/760,208, 10/760,209, 10/760,238, 10/760,234, 10/760,217, 10/760,216, 10/760,212, 10/760,201, 10/760,262, 10/760,231, 10/760,200, 10/760,232 and 10/760,190, it is respectfully submitted that the above discussed amendment to independent claim 1 to incorporate the subject matter of pending claims 40, 41 and 42 traverses these rejections, since pending claim 42 is properly not provisionally rejected for non-statutory double patenting.

It is respectfully submitted that all of the Examiner's objections and rejections have been traversed. Accordingly, it is submitted that the present application is in condition for allowance and reconsideration of the present application is respectfully requested.

Very respectfully,
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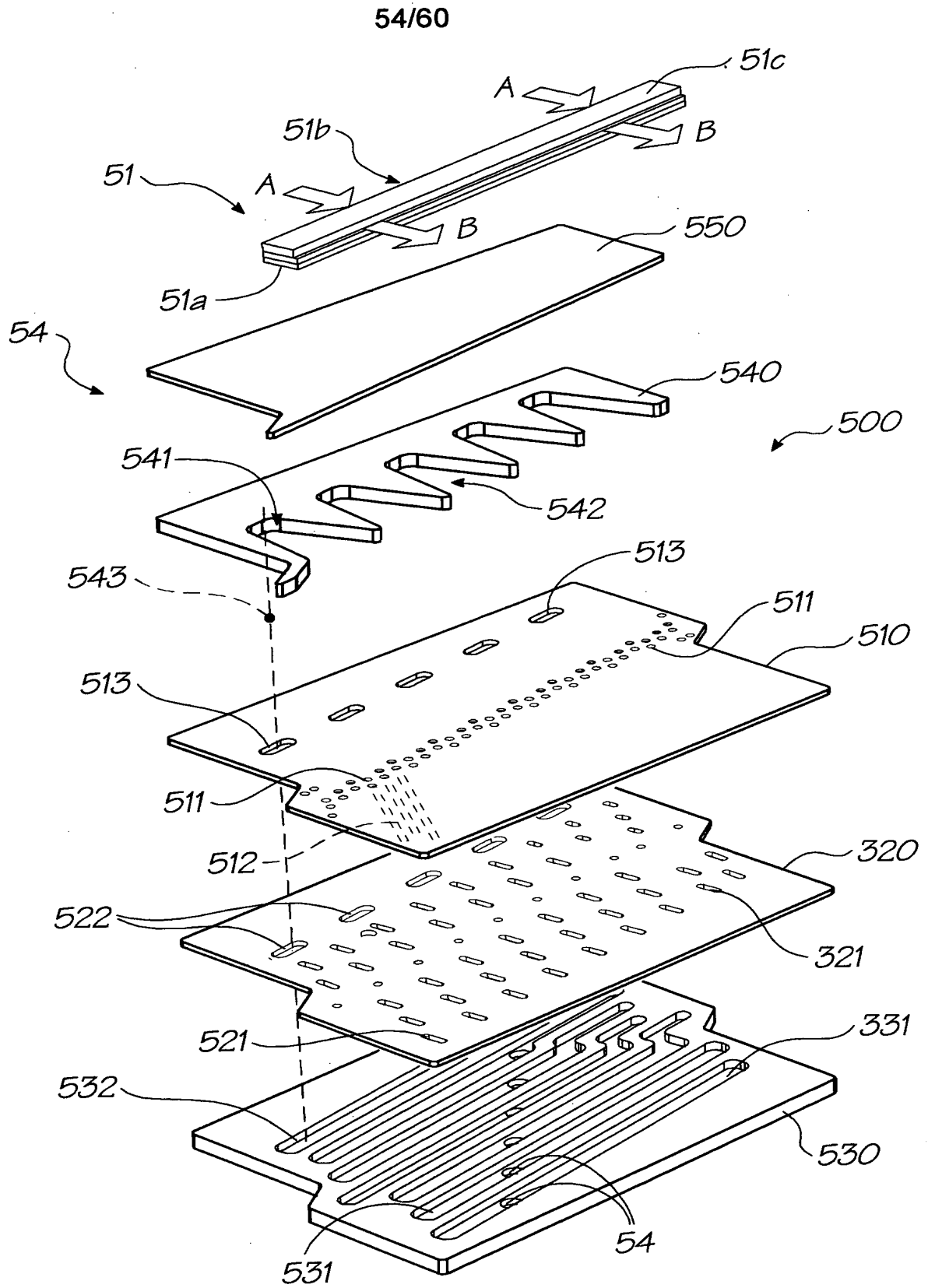


FIG. 43